WHAT IS CLAIMED IS:

1. A method for measuring ligand binding to a vanilloid receptor comprising the steps of:

(a) forming in an aqueous solution having a pH in the range of about 7.5 to about 10.0 a liquid composition comprising a test compound, a labeled ligand, and at least a ligand-interacting portion of a vanilloid receptor protein;

(b) incubating the solution for a time sufficient to permit the test compound and labeled ligand to contact the vanilloid receptor;

(c) measuring the amount of labeled ligand bound to the protein; and

(d) determining if the test compound bound to the receptor by observing a reduction in the amount of expected labeled ligand.

2.The method of claim 2 wherein the ligand-interacting portion of a vanilloid receptor protein is an intact vanilloid receptor protein.

3. The method of claim 1 wherein the vanilloid receptor is a human vanilloid receptor.

4. The method of claim 1wherein the pH is in the range of about 8.0 to about 9.5.

5. The method of claim 1 wherein the pH is in the range of about pH 8.1 to about 9.1.

6. The method of claim 1 wherein the labeled ligand is a radiolabeled ligand.

7. The method of claim 6 wherein the radiolabeled ligand is tritiated resiniferatoxin.

8. The method of claim 1 additionally comprising the steps after the incubating step of:

removing unbound labeled ligand from the solution; and
isolating the receptor protein;

9. The method of claim 1 wherein the aqueous buffer further comprises a divalent cation selected from the group consisting of:
(a) magnesium at a final concentration of between about 1 to about 5mM; and
(b) calcium at a final concentration of about 0.1mM to about 2 mM

10. The method of claim 9 wherein the magnesium concentration is about 2 mM.

11. The method of claim 9 wherein the calcium concentration is about 0.8 mM

12. The method of claim 9 wherein the vanilloid receptor is a human vanilloid receptor.

13. The method of claim 1 wherein the removing step comprises adding a sufficient quantity of alpha 1 acid glycoprotein to the aqueous solution to adsorb unbound labeled ligand.

14. The method of claim 1 wherein the steps are performed in order.

15. The method of claim 9 wherein the isolating step is performed before the removing step.

16. A method to measure ligand binding to a vanilloid receptor comprising the steps, in order

(a) combining in an aqueous solution having a pH in the range of about 7.5 to about 10.0, a test compound, a labeled ligand, and vanilloid receptor protein, said protein being associated with a portion of a cell membrane;

(b) incubating the solution for sufficient time for the test compound and ligand to contact the vanilloid receptor;

(c) adding a sufficient quantity of alpha1 acid glycoprotein to the solution to adsorb unbound labeled ligand;

(d) isolating the membrane from the aqueous solution;

(e) measuring the amount of labeled ligand bound to the protein in the membrane; and

(f) determining if the test compound bound to the receptor by observing a reduction in the amount of expected labeled ligand.

17. A method to measure compound binding to a vanilloid receptor comprising the steps, in order

(a) combining in an aqueous solution having a pH of about 8.6, a test compound, a radiolabeled resiniferatoxin, and a human vanilloid receptor-1 (VR1) protein, said protein being a portion of a cell membrane;

(b) incubating the solution for sufficient time for the test compound and the resiniferatoxin to contact the vanilloid receptor;

(c) adding a sufficient quantity of alpha1 acid glycoprotein to the solution to adsorb unbound resiniferatoxin;

(d) isolating the membrane from the aqueous solution;

(e) measuring the amount of resiniferatoxin bound to the protein in the membrane; and

(f) determining if the test compound bound to the receptor by observing a reduction in the amount of expected resiniferatoxin.

18. The method of claim 17 wherein the buffer also contains a divalent cation selected from the group consisting of:

(a) magnesium at a final concentration of about 2mM; and

(b) calcium at a final concentration of about 0.8mM.